

S.C.U.M.M. Tutorial

“Rising to the top of the Software Cesspool”

Wallace Poulter

Circa 1991

Table of Contents

PREFACE	10
Chapter 1 Introduction	10
Chapter 2 Tutorial	13
2.1.0 Introduction.....	13
2.1.1 Why Scumm?.....	13
2.1.2 Structure of Scumm	15
2.1.3 Structure Explanation.....	17
2.1.4 The Interface.....	20
2.2.1 The say-line command (see 5.7.3).....	20
2.2.2 New Object bat	21
2.2.3 New Verb look-at.....	22
2.2.4 Set State / Set Use	23
2.2.5 Adding a more complicated object front-door	25
2.2.6 New Verb open	25
2.2.7 The state-of command.....	26
2.2.8 New Verb Close.....	27
2.2.9 The if command	27
2.2.10 New Verb Use	28
2.2.11 Redefine object bat	29
2.2.12 New Verb Pick-up	29
2.2.13 The pick-up-object statement	30
2.2.14 The owner-of function	30
2.2.15 New object bozo	31
2.2.16 New Verb Push.....	32
2.2.17 The start-script statement.....	32
2.2.18 Scripts	33
2.2.19 The break-here statement.....	34
2.2.20 New Verb pull.....	34
2.2.21 The stop-script statement.....	35
2.2.22 The script-running function.....	35
2.2.23 The draw-object statement	36
2.2.24 New Object window	37
2.2.25 The class is statement	38
2.2.26 The noun2 function.....	39
2.2.27 New Object closet-door	40
2.2.28 The me function	41
2.2.29 Predefined script open-door	41
2.2.30 The sleep-for statement	42
2.2.31 Exercise One	42
2.2.32 The for statement	43
2.2.33 Exercise Two	43
2.2.34 Exercise Three	43
2.2.35 The draw-object statement Revisited.....	44

2.2.36 The order structure	44
2.2.37 The dependent-on statement	45
2.2.38 Exercise Four.....	45
variables (global and local).....	46
Sound Effects.....	47
Making an object in Flem	47
Adding a new room	48
Editing Boxes	49
Rules for Boxes.....	49
Creating object in new room	51
Building a room.....	51
Come-out-door statement.....	52
Exit and Enter	53
Actor and Object trade-off.....	53
Elevation	53
Actor Classes (changed as of March 1991)	54
Adding a new costume	55
Using default within actor	55
Changing Costumes	56
Actor command explanation	56
Animations	57
Say-line punctuation.....	58
do-animation.....	58
Walk statements	59
Put-actor	59
selected-actor	60
camera.....	60
actor-x function.....	60
cut-scene	60
selected room.....	61
closest-actor	61
proximity	61
Windex	61
Explaining windex	61
debug	62
cut-outs.....	63
Chapter 3 Statements	64
Actor Related (3.1)	64
3.1.1 actor.....	64
3.1.2 class-of:actor related;	68
3.1.3 come-out-door.....	69
3.1.4 do-animation [face-towards]	70
3.1.5 put-actor [at-object] [at x-coord, y-coord] [in-room]	72
3.1.6 stop-actor;.....	73
3.1.7 wait-for-actor	74
3.1.8 walk to [x-coord, y-coord] [actor [within]] [to-object]	75
Camera Related (3.2).....	76
3.2.1 camera-at.....	76
3.2.2 camera-follow.....	76

3.2.3	camera-pan-to	78
3.2.4	fades;	79
3.2.5	wait-for-camera	79
Flow Control (3.3).....		80
3.3.1	case.....	80
3.3.2	do [until].....	82
3.3.3	do-sentence	85
3.3.4	for	86
3.3.5	if [else]	87
3.3.6	jump.....	88
3.3.7	override	89
3.3.8	quit	91
3.3.9	restart.....	91
3.3.10	stop-sentence	91
3.3.11	wait-for-sentence.....	92
Heap Management (3.4)		93
3.4.1	clear-heap	93
3.4.2	load-	94
3.4.3	lock-	94
3.4.4	load-lock-	95
3.4.5	nuke-charset.....	96
3.4.6	unlock-	96
Interface and Screen (3.5)		97
3.5.1	cursor	97
3.5.2	delete-verb	97
3.5.3	draw-box	98
3.5.4	palette	98
3.5.5	set-screen.....	99
3.5.6	shake on/off.....	100
3.5.7	userput.....	100
3.5.8	verb	101
Message Handling (3.6)		103
3.6.1	charset	103
3.6.2	print-line;	103
3.6.3	print-text;.....	105
3.6.4	say-line;	106
3.6.5	wait-for-message	107
Object Related (3.7)		107
3.7.1	class-of:object related;	107
3.7.2	dependent-on	108
3.7.3	draw-object [at x-coord, y-coord]	108
3.7.4	name is	109
3.7.5	new-name-of.....	110
3.7.6	owner-of	111
3.7.7	pick-up-object	112
3.7.8	start-object	113
3.7.9	state-of	113

Room Related (3.8)	115
3.8.1 current-room.....	115
3.8.2 lights [are]]beam-size]	115
3.8.3 pseudo-room.....	116
3.8.4 room-color.....	117
3.8.5 room-scroll.....	118
3.8.6 set-box;	118
Script Related (3.9)	120
3.9.1 chain-script	120
3.9.2 cut-scene	120
3.9.3 freeze-scripts.....	123
3.9.4 start-script.....	124
3.9.5 stop-script.....	125
3.9.6 unfreeze-scripts.....	125
Sound/Music Related (3.10)	126
3.10.1 start-music.....	126
3.10.2 start-sound.....	127
3.10.3 stop-music.....	127
3.10.4 stop-sound	127
Wait Related (3.11)	128
3.11.1 break-here	128
3.11.2 break-until	129
3.11.3 sleep-for.....	130
Actor Related (4.1)	131
4.1.1 actor-box	131
4.1.2 actor-costume.....	131
4.1.3 actor-elevation.....	131
4.1.4 actor-facing	132
4.1.5 actor-moving.....	132
4.1.6 actor-room.....	133
4.1.7 actor-width.....	133
4.1.8 actor-x	133
4.1.9 actor-y	133
4.1.10 closest-actor	134
4.1.11 find-actor	134
4.1.12 proximity	134
Interface and Screen (4.2)	135
4.2.1 find-inventory	135
4.2.2 inventory-size.....	135
4.2.3 valid-verb.....	135
Object Related (4.3)	135
4.3.1 if (class-of.....	136
4.3.2 if (state-of.....	136
4.3.3 find-object.....	136
4.3.4 object-x	137
4.3.5 object-y	137

4.3.6 random	137
Script Related (4.4)	138
4.4.1 script-running	138
Sound/Music (4.5)	138
4.5.1 sound-running.....	138
Chapter 6 System Variables	139
6.1.1 actor-range-min.....	139
6.1.2 actor-range-max	139
6.1.3 actor-talking	139
6.1.4 build-sentence-script.....	139
6.1.5 camera-max.....	139
6.1.6 camera-min	139
6.1.7 camera-script.....	139
6.1.8 camera-x.....	139
6.1.9 complex-temp.....	139
6.1.10 current-lights	139
6.1.11 current-disk-side	140
6.1.12 cursor-x.....	140
6.1.13 cursor-y	140
6.1.14 cut-scene1-script	140
6.1.15 cut-scene2-script	140
6.1.16 cursor-state	140
6.1.17 entered-door	140
6.1.18 enter-room1-script	140
6.1.19 enter-room2-script	140
6.1.20 exit-room1-script	140
6.1.21 exit-room2-script	140
6.1.22 frame-jiffies	141
6.1.23 graphics-mode	141
6.1.24 hard-disk	141
6.1.25 jiffy1	141
6.1.26 jiffy2	141
6.1.27 jiffy3	141
6.1.28 K-of-heap	141
6.1.29 last-sound.....	141
6.1.30 machine-speed.....	141
6.1.31 message-going	141
6.1.32 me.....	141
6.1.33 min-jiffies	142
6.1.34 music-flag	142
6.1.35 number-of-actors.....	142
6.1.36 override-hit	142
6.1.38 pause-key	142
6.1.39 real-selected-room.....	142
6.1.40 restart-key	142
6.1.41 save-load-key	142
6.1.42 screen-x.....	142
6.1.43 screen-y.....	142

6.1.44	selected-actor	143
6.1.45	selected-room	143
6.1.46	sentence-script	143
6.1.47	snap-scroll	143
6.1.48	sound-mode	143
6.1.49	sputm-debug	143
6.1.50	sputm-version	143
6.1.51	text-offset	143
6.1.52	text-speed	143
6.1.53	total-jiffies	143
6.1.54	update-inven-script	143
6.1.55	userput-state	143
	Chapter 7 Errors	144
	Chapter 10 Byle	144
10.1	Introduction	144
10.1.1	Cel Definition	144
10.1.2	Choreography Definition	144
10.1.3	Choreography, Cel Interaction	144
10.1.4	Choreography Directions	145
10.1.5	Level Definition (formerly known as limbs!)	145
10.2	The Interface: An Overview	145
10.2.1	Menu Bar	145
10.2.2	Toolbox	146
10.2.3	Palette and Color Indicator	146
10.2.4	The cel table	147
10.2.5	The choreography cel list table	147
10.2.6	Painting Area/Animation Area	147
10.2.7	Lower Screen Buttons.	147
10.2.	File requestor window	147
10.3	The Cel Table and Choreography Cel list Table	148
10.4	The Lower Screen Buttons.	151
10.4.1	chore	151
10.4.2	chore name	151
10.4.4	animation cel by cel button	151
10.4.5	xrel button	152
10.4.6	yrel button	152
10.4.7	directional buttons	153
10.5	The Menu bar options	153
10.5.1	Pull down Menu: File	153
10.5.1.1	load costume	154
10.5.1.2	save costume	154
10.5.1.3	save costumes as	154
10.5.1.4	make costume	154
10.5.1.5	load	154
10.5.1.6	load lbm palette	154
10.5.1.7	load lbm back drop	154
10.5.1.8	write chores def	154
10.5.1.9	quit	154
10.5.2	Pull down Menu: Copy	155

10.5.2.1 copy level.....	155
10.5.2.2 copy cel	155
10.5.2.3 copy chore	155
10.5.2.4 copy list	155
10.5.2.5 paste	155
10.5.3 Pull down Menu: Brush	155
10.5.3.1 flip x	155
10.5.3.2 flip y	156
10.5.3.3 normal scale	156
10.5.3.4 half scale	156
10.5.3.5 scale up	156
10.5.3.6 scale down	156
10.5.3.7 set scale	156
10.5.3.8 replace	156
10.5.3.9 color.....	156
10.5.4 Pull down Menu: Chores.....	156
10.5.4.1 name a chore	156
10.5.4.2 Choreographies 00-15.....	156
10.5.4.3 next set of chores	157
10.5.5 Pull down Menu: Special	157
10.5.5.1 insert	157
10.5.5.2 palette	157
10.5.5.3 Remap palette	157
10.5.5.4 no flip left.....	158
10.5.5.5 verbose output!	158
10.5.5.6 debug cel states	158
10.5.5.7 remove unused cels.....	158
10.5.5.8 onion skin.....	158
10.5.6 Pull down Menu: Backdrop	158
10.5.6.1 load lbm backdrop.....	158
10.5.6.2 show backdrop	158
10.5.6.3 save lbm backdrop	159
10.5.6.4 Load .wak file.....	159
10.6 Toolbox explanation	159
10.6.1 Tool 1: Freehand Brush	159
10.6.2 Tool 2: Straight Line Tool	159
10.6.3 Tool 3: Rectangle Tool (Filled).....	159
10.6.4 Tool 4: Rectangle Tool (Unfilled)	159
10.6.5 Tool 5: The Fill Tool.....	160
10.6.6 Tool 6: The Brush Pickup Tool.....	160
10.6.7 Tools 7 (and 17): Grid Tools	160
10.6.8 Tool 8: Magnify Tool.....	160
10.6.9 Tool 9: Color Pickup Tool	160
10.6.10 Tool 10: Undo	161
10.6.11 Tool 11: Stamp Tool	161
10.6.12 Tool 12: Blank	161
10.6.13 Tool 13: Ellipse Tool (filled).....	161
10.6.14 Tool 14: Ellipse Tool (Unfilled)	161
10.6.15 Tool 15: The Grid Tool I	161
10.6.16 Tool 16: The Grid Tool II (costume box grid)	162

10.6.17 Tools 17 (and 7): Grid Tools.....	162
10.6.18 Tool 18: Hand Tool	163
10.6.19 Tool 19: Blank.....	163
10.6.20 Tool 20: Clear Tool	163
10.6.21 Color Indicator.....	163
10.6.22 Palette.....	163
10.6 Question section.....	163
10.7 A look at a specific costume.....	164
10.7.1 Walk choreography	165
10.7.2 Init choreography.....	166
10.7.3 Stand choreography	167
10.7.4 Talk choreography.....	167
10.7.5 Stop Talking choreography.....	168
10.7.6 One hand point choreography.....	168
Appendix A Definitions.....	169
 2.1.1 Frame	169
 2.1.2 Heap.....	170
 2.1.3 Use direction.....	170
 2.1.4 Use position.....	170
Appendix B Structure	170
 3.0.1 Basic Structure	170
Structure Room Definitions (3.1).....	171
 3.1.1 include	171
 3.1.2 script.....	172
 3.1.3 room	173
 3.1.4 sounds	173
 3.1.5 costumes.....	173
 3.1.6 enter	174
 3.1.7 exit.....	174
 3.1.8 order.....	175
Structure Object Definitions (3.2).....	175
 3.2.1 object.....	175
 3.2.2 name is	175
 3.2.3 dependent-on	176
 3.2.4 class is	176
 3.2.5 verb	176
Appendix F System Variables - Slot Order.....	177
INDEX (from imported doc)	179

PREFACE

Scumm stands for Script Creation Utility for Maniac Mansion. Originally first developed for the game Maniac Mansion, in 1987, the Scumm system has developed into the mainstay of the company's product line. Somewhat appropriately for a system developed by Lucasfilm, Scumm uses concepts such as Actors, Costumes, Cameras, Sound Effects, and Scripts.

Scumm was originally designed for the C64 by Ron Gilbert. While we program on an IBM clone, Scumm is not tied to any particular hardware and Scumm programs will run with little change on other machines.

All of the utilities that we use in Scumm are named after various disgusting bodily fluids such as flem, byle, and mmucus. This can lead to interesting conversations at restaurants. Asking a co-worker if they have "flemed" something yet and receiving the reply that they are awaiting it to be "byled."

It is possible to do almost anything in Scumm, although not always elegantly.

As with all endeavors, the contribution of others has helped bring this manual to fruition.

Thanks are in order to Ron Gilbert, David Fox, and Aric Wilmunder, for constructive comments and information.

Also thanks to the Scummlettes: Ron Baldwin, Jenny Sward, Dave Grossman, Tim Schafer; and the Scumm Babies; Sean Clark, Mike Stemmle, Tony Hsieh and Tami Borowick.

Finally thanks to Noah Falstein, Hal Barwood, and Kalani Streicher for their help during Scumm-U and beyond.

Chapter 1 Introduction

A long time ago in a Galaxy far far away, Ron Gilbert created the scumm system on a Commodore 64. Despite this the Scumm System has grown to be the mainstay of the Lucasfilm game line.

Scumm is an acronym and stands for Script Creation Utility for Maniac Mansion.